

REMARKS

Claims 1-25 are rejected. Claims 1, 10, and 19 are amended herein. Claims 26, 27, and 28 are new. No new matter is added as a result of the Claim amendments.

35 U.S.C. § 102 Rejections

Claims 1-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Suzuki (6,529,188), hereinafter referred to as "Suzuki." The Applicants respectfully submit that the embodiments of the present invention recited in Claims 1, 10, and 19 are not taught or suggested by Suzuki. Claim 1 of the present invention recites,

a display device;
a digitizer comprising a layer of flexible conductive paste disposed above a digitizing element, said flexible conductive paste capable of functioning in a non-planar surface; and
a single-piece bezel-less top cover enclosing said electronic device _ and said digitizer and operable to allow mechanical transfer of external pressure to cause said layer of conductive paste to contact and activate said digitizing element responsive to said external pressure, wherein a point of contact on said single-piece top cover is detected _.

Independent Claims 10 and 19 recite similar Claim limitations. The Applicants respectfully submit that Suzuki does not teach or suggest a digitizer comprising a layer of flexible conductive paste capable of functioning on a non-planar surface. Instead, the Applicants respectfully submit that Suzuki teaches away from the recited claim limitations by use of a brittle material that requires a planar surface. For example, Suzuki teaches in column 10, lines 48-56 (emphasis added):

The upper substrate 4A is constituted such that on a whole inner surface of a soft film made of polyethylene terephthalate (PET) film, the

resistance film preferably made of indium tin oxide (ITO) is formed in a planar manner.

Similarly, the lower substrate 4B is constituted such that on a whole inner surface of a hard substrate preferably made of glass, the resistance film 22 preferably made of ITO is formed in a planar manner.

The Applicants respectfully submit that the teaching by Suzuki relates to a conventional fabrication process in which a planar layer of ITO having a "paste consistency" is applied and becomes brittle afterwards as it dries. As a result, the surface to which the ITO layer is applied must be planar to minimize damage to the resistance film. Suzuki teaches in column 11, lines 28-61 that comb-shaped resistance films 51 and 52 are made of a large number of these planar thin resistance films. Therefore, the Applicants respectfully submit that Suzuki teaches the use of conventional resistance films comprised of multiple photo-etched layers of ITO which are formed in a planar manner and are brittle and non-functional over a three dimensional (e.g., contoured) surface.

As described in the prior art section, ITO is a brittle material which is prone to breakage and degradation over time. This is further taught in column 2, lines 62-67 of Suzuki. As a result of the brittleness of the ITO layer, conventional digitizer mechanisms, such as that taught by Suzuki, necessitate using a flat or planar surface for the ITO layer to reduce the likelihood of damage. Thus, the Applicants respectfully submit that Suzuki teaches a conventional planar ITO layer which is not suitable for use in a non-planar surface as recited in Claims 1, 10, and 19 of the present invention. Additionally, there is no indication in the teaching of Gettemy that the use of ITO having a paste consistency overcomes the problem of brittleness

described above or that the ITO paste is capable of functioning in a non-planar surface.

Claims 26, 27 and 28

Claims 26, 27, and 28 depend from independent Claims 1, 10, and 19 respectively and recite additional limitations descriptive of embodiments of the present invention. Claims 26, 27, and 28 recite that the layer of flexible conductive paste comprises a conductive polymer. Page 13, line 22-page 14, line 8 teach that embodiments of the present invention utilize a layer of Electrodag® polymers as a flexible member of the digitizing element. The Applicants respectfully submit that the use of a digitizer comprising a layer of flexible conductive polymer disposed above a digitizing element is not taught or suggested by Suzuki which uses brittle material that must be applied to a planar surface. Accordingly, the Applicants respectfully solicit allowance of Claims 26, 27, and 28.

Moreover, the Applicants respectfully submit that Suzuki does not teach or suggest that the silver paste cited in the rejection contacts and activates the digitizing element as a result of external pressure applied to a single-piece bezel-less top cover as recited in the claim limitations. Instead, the silver paste in Suzuki's invention is a permanent electrical connection between connection points on the periphery of layers 4A and 4B and does not operate in accordance with the claimed embodiment above. For example, Suzuki states in column 11, lines 4-10 (emphasis added):

When the lower substrate 4B is laminated to the upper substrate 4A, connection points T1, T3 of the downside connection portions 53, 54 of the upper substrate 4A and connection points T2, T4 of the upside connection portions 43, 44 of the lower substrate are electrically connected with each other through a conductive material preferably made of a silver paste.

Suzuki also states in column 11, line 67- column 12, lines 1-13:

Here, connection points T1, T3 of the upper substrate 4A are respectively electrically connected with connection points T2, T4 of the lower substrate 4B using a silver paste. Due to such a constitution, the terminals Y1, Y2 and the terminals X1, X2 are respectively bridged to an upper common connection portion 41 of the upper substrate 4A and a lower common connection portion 42 of the lower substrate 4B so as to form detection terminals. Then, in the external circuit, based on a resistance value corresponding to a distance between contact points of the upper comb-shaped resistance film 51 and the lower comb-shaped resistance film 52 at an input point by pushing and respective common connection points, the coordinates (x, y) are detected.

Suzuki teaches this again in column 12, lines 28-31. As such, the Applicants respectfully submit that the cited silver paste of Suzuki comprises a permanent electrical connection between the upper and lower substrate layers. Suzuki further teaches that detection of a point of contact (e.g., by pen 560 upon upper substrate 4A) is performed by the comb-shaped resistance films 51 and 52. In other words, external pressure upon the top cover does not cause the silver paste of Suzuki to contact and activate the digitizing element as recited in Claims 1, 10, and 19. Accordingly, the Applicants respectfully submit that Suzuki does not teach or suggest the claim limitations of a digitizer comprising a layer of flexible conductive paste capable of functioning in a non-planar surface as recited in Claims 1, 10, and 19 of the present invention.

Furthermore, the Applicants respectfully submit that Suzuki does not teach or suggest a single-piece top cover which encloses an electronic device and a digitizer . Instead, Suzuki simply shows section views of liquid crystal displays without referring to the top cover of the electronic device. Accordingly, the Applicants respectfully submit that Suzuki does not teach or suggest the recited claim limitation of a top cover for an electronic device as recited Claims 1, 10, and 19 of the present invention. Additionally, the Applicants respectfully submit that the exemplary portable information terminal shown in Figure 12 of Suzuki clearly does not have a single-piece cover which encloses the terminal as recited in Claims 1, 10, and 19 of the present invention.

Additionally, Claim 19 recites that the single-piece bezel-less top cover has a three-dimensional top surface which is unsuitable for the manufacturing process suggested by Suzuki. Therefore, the Applicants respectfully submit that using the ITO paste of Gettemy is not supported by the teaching of Suzuki. Accordingly, the Applicants respectfully assert that Suzuki does not teach or suggest the claim limitation of a digitizer comprising a layer of conductive paste disposed above a digitizing element as recited in Claims 1, 10, and 19 of the present invention.

Claim 1 of the present invention recites a layer of flexible conductive paste capable of functioning in a non-planar surface disposed above a digitizing element and which activates the digitizing element in response to external pressure applied to a single-piece top cover which encloses an electronic device . Claims 10 and 19 of the present invention similarly recited that contact between the digitizing element and

the conductive paste is registered in response to mechanical transfer of pressure upon a single-piece bezel-less top cover which encloses an electronic device . The Applicants respectfully submit that Suzuki does not teach or describe the above Claim limitations. Therefore, the Applicants respectfully submit that the rejection of Claims 1, 10, and 19 of the present invention under 35 U.S.C. § 102(e) has been overcome.

With reference to Claim 2 of the present invention, the Applicants respectfully submit that Suzuki does not teach or suggest the recited claim limitation of a single-piece top cover comprising a flexible thermoplastic outer film which has a three-dimensional top surface and which encloses an electronic device. Therefore, the Applicants respectfully submit that the rejection of Claim 2 of the present invention under 35 U.S.C. § 102(e) is overcome.

With reference to Claim 3 of the present invention, the Applicants respectfully submit that Suzuki does not teach or suggest the recited claim limitation of a single-piece top cover which encloses an electronic device comprising a flexible thermoplastic outer film having a three-dimensional top surface and a supporting structure that is coupled to the transparent flexible thermoplastic outer film. Therefore, the Applicants respectfully submit that the rejection of Claim 3 of the present invention under 35 U.S.C. § 102(e) is overcome.

With reference to Claim 4 of the present invention, the Applicants respectfully submit that Suzuki does not teach or suggest the recited claim limitation of a single-

piece top cover free of any steps, openings, or indentations which encloses an electronic device. Therefore, the Applicants respectfully submit that the rejection of Claim 4 of the present invention under 35 U.S.C. § 102(e) is overcome.

With reference to Claim 5 of the present invention, the Applicants respectfully submit that Suzuki does not teach or suggest the recited claim limitation of a digitizer comprising a layer of flexible conductive paste capable of functioning in a non-planar surface disposed above a digitizing element and a plurality of electrodes and traces operable to register a point of contact when said conductive paste makes contact with a digitizing element of an electronic device enclosed by a single-piece top cover. Therefore, the Applicants respectfully submit that the rejection of Claim 5 of the present invention under 35 U.S.C. § 102(e) is overcome.

With reference to Claim 6 of the present invention, the Applicants respectfully submit that Suzuki does not teach or suggest the recited claim limitation of a single-piece top cover which encloses an electronic device and further which comprises a decorative border constructed therein using an in mold decoration process. Therefore, the Applicants respectfully submit that the rejection of Claim 6 of the present invention under 35 U.S.C. § 102(e) is overcome.

With reference to Claim 7 of the present invention, the Applicants respectfully submit that Suzuki does not teach or suggest the recited claim limitation of a single-piece top cover which encloses an electronic device and which has a decorative border disposed directly beneath the single-piece top cover and above a digitizer. Therefore,

the Applicants respectfully submit that the rejection of Claim 7 of the present invention under 35 U.S.C. § 102(e) is overcome.

With reference to Claim 8 of the present invention, the Applicants respectfully submit that Suzuki does not teach or suggest the recited claim limitation of a decorative border which hides electrical circuits and traces along the periphery of a digitizer that is disposed directly beneath a single-piece top cover enclosing an electrical device. Therefore, the Applicants respectfully submit that the rejection of Claim 8 of the present invention under 35 U.S.C. § 102(e) is overcome.

With reference to Claim 9 of the present invention, the Applicants respectfully submit that Suzuki does not teach or suggest the recited claim limitation of a single-piece top cover which encloses an electronic device and which has indentations to indicate button functions. Therefore, the Applicants respectfully submit that the rejection of Claim 9 of the present invention under 35 U.S.C. § 102(e) is overcome.

With reference to Claim 11 of the present invention, the Applicants respectfully submit that Suzuki does not teach or suggest a single-piece bezel-less top cover having a three-dimensional top surface which encloses an electronic device. Furthermore Suzuki does not teach or suggest the claim limitation that the single-piece bezel-less top cover comprises a flexible thermoplastic outer film coupled with a supporting structure as recited in Claim 11. Therefore, the Applicants respectfully submit that the rejection of Claim 11 of the present invention under 35 U.S.C. § 102(e) is overcome.

With reference to Claim 13 of the present invention, the Applicants respectfully submit that Suzuki does not teach or suggest the recited claim limitation of a single-piece bezel-less top cover which encloses an electronic device and which has sufficient deflection under external pressure to cause a layer of flexible conductive paste disposed underneath to contact and activate a resistive digitizer mechanism. Therefore, the Applicants respectfully submit that the rejection of Claim 13 of the present invention under 35 U.S.C. § 102(e) is overcome.

With reference to Claim 14 of the present invention, the Applicants respectfully submit that Suzuki does not teach or suggest the recited claim limitation of a single-piece bezel-less top cover which encloses an electronic device and which is free of any steps, openings, or indentations. Therefore, the Applicants respectfully submit that the rejection of Claim 14 of the present invention under 35 U.S.C. § 102(e) is overcome.

With reference to Claim 15 of the present invention, the Applicants respectfully submit that Suzuki does not teach or suggest the recited claim limitation of a single-piece bezel-less top cover which encloses an electronic device and which comprises a decorative border constructed therein using an in mold decoration process. Therefore, the Applicants respectfully submit that the rejection of Claim 15 of the present invention under 35 U.S.C. § 102(e) is overcome.

With reference to Claim 16 of the present invention, the Applicants respectfully submit that Suzuki does not teach or suggest the recited claim limitation of a single-piece bezel-less top cover which encloses an electronic device and which has a decorative border disposed directly beneath the single-piece cover and above a resistive digitizer mechanism. Therefore, the Applicants respectfully submit that the rejection of Claim 16 of the present invention under 35 U.S.C. § 102(e) is overcome.

With reference to Claim 17 of the present invention, the Applicants respectfully submit that Suzuki does not teach or suggest a single-piece bezel-less top cover which encloses an electronic device and which has a decorative border disposed directly beneath that hides electrical traces and circuits along a periphery of a digitizer. Therefore, the Applicants respectfully submit that the rejection of Claim 17 of the present invention under 35 U.S.C. § 102(e) is overcome.

With reference to Claim 18 of the present invention, the Applicants respectfully submit that Suzuki does not teach or suggest the recited claim limitation of a single-piece bezel-less top cover which encloses an electronic device and has indentations to indicate button functions . Therefore, the Applicants respectfully submit that the rejection of Claim 18 of the present invention under 35 U.S.C. § 102(e) is overcome.

With reference to Claim 20 of the present invention, the Applicants respectfully submit that Suzuki does not teach or suggest the recited claim limitation of a transparent, flexible, single-piece cover having a bezel-less and three-

dimensional top surface free of any steps, openings, or indentations which is coupled to a supporting structure and which encloses an electronic device. Therefore, the Applicants respectfully submit that the rejection of Claim 20 of the present invention under 35 U.S.C. § 102(e) is overcome.

With reference to Claim 21 of the present invention, the Applicants respectfully submit that Suzuki does not teach or suggest the recited claim limitation of a transparent single-piece cover having a bezel-less and three-dimensional top surface which encloses an electronic device and which has sufficient deflection under external pressure to activate a resistive digitizer mechanism disposed beneath. Therefore, the Applicants respectfully submit that the rejection of Claim 21 of the present invention under 35 U.S.C. § 102(e) is overcome.

With reference to Claim 22 of the present invention, the Applicants respectfully submit that Suzuki does not teach or suggest the recited claim limitation of a transparent single-piece cover having a bezel-less and three-dimensional top surface which encloses an electronic device and which further comprises a decorative border constructed using an in mold decoration process. Therefore, the Applicants respectfully submit that the rejection of Claim 22 of the present invention under 35 U.S.C. § 102(e) is overcome.

With reference to Claim 23 of the present invention, the Applicants respectfully submit that Suzuki does not teach or suggest the recited claim limitation of a transparent single-piece cover having a bezel-less and three-dimensional top

surface which encloses an electronic device and which has a decorative border disposed directly beneath the transparent single-piece cover and above a resistive digitizer mechanism of the electronic device. Therefore, the Applicants respectfully submit that the rejection of Claim 23 of the present invention under 35 U.S.C. § 102(e) is overcome.

With reference to Claim 24 of the present invention, the Applicants respectfully submit that Suzuki does not teach or suggest the recited claim limitation of a transparent single-piece cover having a bezel-less and three-dimensional top surface which encloses an electronic device and which has a decorative border disposed directly beneath which hides electrical traces and circuits along the periphery of a resistive digitizer. Therefore, the Applicants respectfully submit that the rejection of Claim 24 of the present invention under 35 U.S.C. § 102(e) is overcome.

With reference to Claim 25 of the present invention, the Applicants respectfully submit that Suzuki does not teach or suggest the recited claim limitation of a transparent single-piece cover having a bezel-less and three-dimensional top surface which encloses an electronic device and which has indentations to indicate button functions. Therefore, the Applicants respectfully submit that the rejection of Claim 25 of the present invention under 35 U.S.C. § 102(e) is overcome.

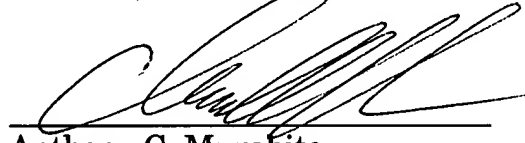
CONCLUSION

Based on the arguments presented above, the Applicants respectfully assert that Claims 1-25 overcome the rejections of record and, therefore, the Applicants respectfully solicit allowance of these Claims.

The Examiner is invited to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,
WAGNER, MURABITO & HAO LLP

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Anthony C. Murabito
Reg. No. 35,295

Two North Market Street
Third Floor
San Jose, California 95113
(408) 938-9060